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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/777,368	02/05/2001	Andy C. Neilson	FSII 303	4251

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EXAMINER

SNAY, JEFFREY R

ART UNIT	PAPER NUMBER
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1743

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/777,368	Applicant(s) NEILSON ET AL.	
	Examiner Jeffrey R. Snay	Art Unit 1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-11, 14, 22-26, 28-32, 34 and 35 is/are rejected.
- 7) ☒ Claim(s) 12, 13, 15-21, 27 and 33 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 February 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>see office action</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claims 36-74 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 08-06-04.
2. Claims 36-74 have been cancelled by Applicant.
3. Applicant is advised that should claim 22 be found allowable, claim 23 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 3, 4, 6-11, 14, 22-25, 29-32 and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Lund et al ('784).

Lund et al disclose a thawing station which comprises all of the presently recited elements. Specifically, referring to Figures 1 and 2 of Lund et al, the disclosed apparatus comprises a frame (24), and an array of sample wells (19) supported by the frame. The frame further comprises a thermal isolation structure disposed between each of the wells in order to reduce or prevent thermal transfer between wells. Specifically, the frame is disclosed as comprising a sleeve (14) comprised of aluminum positioned in each well so as to receive and surround individual sample wells (col. 3, lines 15-18), and surrounding each such sleeve is a mass of thermally insulative material such as an elastomer which serves to thermally isolate each sleeve (col. 3, lines 43-49).

With respect to instant claims 3 and 4, Lund et al specifically disclose an array of sample wells having 96 wells, arranged in an 8X12 pattern, with 9mm on-center spacing (col. 3, lines 10-13). The noted arrangement would have resulted in a well density of at least 1 well per 81 mm².

With respect to instant claim 6, Lund et al disclose the sample wells being formed of a single injection molding of a chemically inert plastic (col. 1, lines 10-13), whereas the thermal isolation structure is formed of both aluminum and a thermally insulative elastomer.

With respect to instant claims 6, 31 and 32, see Figure 2 of Lund et al, disclosing the thermal isolation structure as surrounding each sample well without obstructing a transmission path therethrough.

With respect to instant claims 8-10, it is noted that the thermally insulative elastomer, as well as the aluminum sleeve, of Lund et al would have constituted the presently claimed thermal buffer. Particularly, instant claim 10 identifies the provision of aluminum as a thermal buffer, and Lund et al specifically disclose aluminum in the form of sleeves. With respect to instant claim 11, the thermally insulative elastomer of Lund et al would have constituted the presently recited high-thermal-capacitance plastic.

With respect to instant claims 14, 22, 23, and 34 see Figure 1 of Lund et al disclosing the sample wells being fluidically isolated, as well as thermally isolated, from one another.

With respect to instant claims 24-25, see Figures 1 and 2 of Lund et al disclosing a space enclosed between the bottom of each sample well and cold plate (20).

With respect to instant claims 29 and 30, it is noted that each of the wells in Lund et al is surrounded annularly by thermally insulative elastomer (24), which elastomer would have constituted the presently recited thermal reference region in view of its insulative characteristic.

Claim Rejections - 35 USC § 103

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6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lund et al.

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Lund et al, as described above, differs from the presently claimed invention in that it fails to teach the space below each of the sample wells being evacuated. However, Lund et al make clear that the intention of the disclosed apparatus is to thermally isolated each sample well from one another. As it was well known in the field of heat transfer that air is capable of thermal transfer, either conductively or convectively, it would have been obvious to one of ordinary skill in the art in view of sound engineering principles to evacuate air from the noted spaces in order to further facilitate the desired thermal isolation of sample wells.

10. Claims 2, 5, 28 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lund et al in view of Cassin et al ('287).

Lund et al, as described above, differs from the presently claimed invention in that it fails to positively disclosed the claimed dimensions and cover. Specifically, Lund et al teach only a multiwell sample plate having 96 wells, each of a volume of 1 ml, and makes no mention of providing a cover. As compared with instant claim 2, Lund et al teach sample tray dimensions that would equate to about 108 mm by 72 mm.

However, Cassin et al teach alternative multiwell sample plates having different well densities, numbers of wells, well volumes and overall dimensions (see Table 1). It would have been obvious to one of ordinary skill in the art to modify the apparatus of Lund et al to accomodate any known multiwell plate, such as those taught by Cassin et al, governed by the desired number and volume of samples. Furthermore, Cassin et al teach it was known to provide a multiwell sample tray with a cover member in order to

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prevent evaporation loss (col. 21, Example 3), and it would have been obvious to similarly provide the sample tray of Lund et al with a cover for the known purpose.

Allowable Subject Matter

11. Claims 12, 13, 15-21, 27 and 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
12. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to teach or fairly suggest the presently recited embodiment which includes the provision of an infrared reflective layer on the thermal barrier.
13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure as background information generally related to applicant's field of endeavor.
14. Applicant's information disclosure statements, submitted respectively on 04-02-01, 05-13-02 (two submissions), and 10-15-02, have been considered.
15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. Snay whose telephone number is (571) 272-1264. The examiner can normally be reached on Mon-Fri.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jeffrey R. Snay
Primary Examiner
Art Unit 1743

jrs